

REMARKS

Applicants request favorable reconsideration and withdrawal of the rejections set forth in the above-noted Office Action in view of the foregoing amendment and the following remarks.

Claims 1 and 3-6 remain pending, with claim 1 being the only independent claim. Claim 1 has been amended. Support for the amendment to claim 1 can be found throughout the originally-filed disclosure, including, for example, in the specification at page 22, lines 17-20. Claim 4 has been amended to correct a typographical error. Thus, Applicants submit that the amendment does not include new matter.

Section 112 Rejection

Claims 1 and 3-6 are rejected in the Office Action under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Specifically, the Office Action asserts that there is not support in the originally-filed disclosure for the feature of thiodipropionic acid or a salt thereof and tocopherol or a derivative thereof being added in a total proportion of “1 to less than 10 wt.%” based on the inorganic pigment, as previously recited in claim 1.

Applicants respectfully traverse this rejection, and submit that the originally-filed disclosure supports the range previously recited in claim 1. Further, Applicants submit that the originally-filed disclosure supports the amended ranged now recited in claim 1.

Initially, Applicants note that there is no in haec verba requirement for amended claim features to be described in the originally-filed disclosure. Instead, the written description requirement is met when the amended claim features are described in the originally-filed disclosure with reasonable clarity to conclude that one of ordinary skill would consider the claim features to be a part of the Applicant’s invention. See MPEP § 2163.02. In the present application, the originally-filed disclosure notes that the ink-receiving layer can include

thiodipropionic acid or its salt and tocopherol or its derivative at a total proportion of from 1 to 20 wt.% based on the inorganic pigment. See, e.g., original claim 2 and the specification at p. 5, lines 22-24. The originally-filed disclosure further describes an example embodiment wherein the thiodipropionic acid and the tocopherol are added in a solid proportion of 5 wt. % based on the inorganic pigment (aluminum hydrate). Specification, p. 22, lines 17-19. The originally-filed disclosure, therefore, includes a description of a range that fully encompasses the now more narrowly claimed range, with the described range including the low end-point of the now-claimed range at 1 wt. %. Further, the originally-filed disclosure includes a description of the other end-point of the now-claimed ranged at 5 wt. % in a specific example. Thus, Applicants submit that one of ordinary skill in the art would consider the now claimed range of 1 to 5 wt. % for the thiodipropionic acid or its salt and the tocopherol or its derivative to be part of Applicants' invention based on the originally-filed disclosure.

Further in this regard, the written description supporting the now claimed range is similar to the description for the range in the factually-similar case In re Wertheim, 541 F.2d 257 (CCPA 1976). In Wertheim, the court found that the range "between 35% and 60%" to be supported in a priority application's written description of a range of 25 to 60%, and specific embodiments of 36% and 50%. 541 F.2d at 264-65. As in Wertheim, the originally-filed disclosure of the present application includes a written description of a range that is broader and encompasses the now claimed more narrow range, and, further, describes both endpoints of the range. According to the logic of the Wertheim case, therefore, the claimed range is supported by the originally-filed disclosure so as to satisfy the written description requirement.

For at least the foregoing reasons, Applicants submit that the originally-filed disclosure includes a written description of the range recited in amended independent claim 1.

Accordingly, Applicants submit that the Section 112 rejection should be withdrawn.

Section 103 Rejections

Claims 1 and 6 are rejected in the Office Action under 35 U.S.C. § 103(a) as being unpatentable over Malhotra et al. (U.S. Patent No. 6,444,294) in view of Tsuchida et al. (Japanese Patent Pub. No. 2002-103807). Claims 3-5 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Malhotra et al. in view of Tsuchida et al., and further in view of Kitamura et al. (U.S. Patent Application Pub. No. 2001/0016249).

Applicants respectfully traverse these rejections. Nevertheless, without conceding the propriety of the rejections and solely to expedite prosecution, Applicants have amended independent claim 1 to even further clarify distinctions between the invention and the cited references. To this end, Applicants submit that the claimed invention is patentably distinguishable from the cited references for at least the following reasons.

Amended independent claim 1 recites a recording medium with at least one ink-receiving layer, wherein the ink-receiving layer comprises, inter alia, an inorganic pigment, and thiodipropionic acid or a salt thereof and tocopherol or a derivative thereof in a total proportion of 1 to 5 wt.% based on the inorganic pigment. Applicants submit that the references cited in the Office Action fail to disclose or suggest at least this feature of the invention.

The Office Action appears to acknowledge that Malhotra et al. does not expressly disclose thiodipropionic acid or a salt thereof and tocopherol or a derivative thereof in a total proportion of 1 to less than 10 wt.% (as previously claimed) based on the inorganic pigment. The Office Action notes, however, that Malhotra et al. discloses that the materials therein are not

limited to the specific amounts, and that the amounts of the materials may be present in “any desired or effective amount.” The Office Action asserts, therefore, that Malhotra et al. includes the situation where the percentage of thiodipropionic acid or a salt thereof and tocopheral or its derivate thereof is from 1 to 10 wt.% based on the inorganic pigment.

Applicants respectfully traverse this reasoning on several grounds. Applicants note that the Office Action acknowledges that Malhotra et al. does not disclose the use of a thiodipropionic acid or a salt thereof, and, indeed, cites the secondary reference to Tsuchida et al. for suggesting this aspect of the claimed invention. Thus, as an initial point, the disclosure in Malhotra et al. with respect to the amounts of the components, including the cited general statement, does not necessarily apply to a modified composition including thiodipropionic acid or a salt thereof, as the reference does not in and of itself disclose such a composition.

Applicants further submit that the disclosure in Malhotra et al. that the amounts of the materials may be present in “any desired or effective amount” falls well short of the operability required to conclude that the reference anticipates the claimed percentage of thiodipropionic acid or salt thereof and tocopheral or its derivate. A reference provides an enabling disclosure sufficient to anticipate a claimed invention only if it describes the claimed invention in sufficient detail to enable a person of ordinary skill in the art to carry out the claimed invention without undue experimentation. See MPEP § 2121 (noting, for example, that the mere naming or description of subject matter in a reference is insufficient to constitute anticipation, if it cannot be produced without undue experimentation). In this case, the mere statement in Malhotra et al. that the amounts of the materials may be present in a desired or effective amount, in and of itself, does not provide any guidance to one of ordinary skill in the art as to what amounts would be desired or effective. Given that the disclosed composition of Malhotra et al. contains multiple

components, one of ordinary skill in the art in view of this statement would still be required to experiment with countless combinations to arrive at Applicants' claimed invention. Thus, Malhotra et al. does not provide an enabling disclosure so as to anticipate the percentage of thiadipropionic acid or salt thereof and tocopheral or its derivate recited in amended independent claim 1.

The Office Action further asserts that it would have been obvious to one of ordinary skill in the art to modify the percentage of all of the components of Malhotra et al. to any amount, including those claimed, in order to arrive at a recording medium that had the proper amount of lightfastness and image sharpness.

Applicants respectfully submit that this conclusion is flawed for analogous reasons to the above-described reasons why Malhotra et al. cannot be understood to anticipate the claimed percentage of thiadipropionic acid or salt thereof and tocopheral or its derivate. Malhotra et al. is not suggestive of the specifically claimed percentage, and, as such, one of ordinary skill in the art would necessarily have to conduct innumerable experiments to modify the percentage of all of the components in order to even possibly conclude that Applicants' claimed percentage provides some advantage from all other percentages. The possibility of unending experimentation does not evidence obviousness. Thus, Applicants submit that the disclosure of Malhotra et al. is far from sufficient to conclude that it would have been obvious to one of ordinary skill in the art to derive the claimed percentage of thiadipropionic acid or salt thereof and tocopheral or its derivate.

The Office Action further asserts that Malhotra et al. discloses a proportion of 9 wt.% thiadipropionic acid and tocopheral relative to the filler (inorganic pigment).

While Applicants do not necessarily concede the Office Action's is correct in this regard, it is noted that amended independent claim 1 recites that the percentage of thiodipropionic acid or salt thereof and tocopheral or its derivate relative to inorganic pigment is from 1 to 5 wt.%. Thus, assuming, arguendo, that the Office Action is correct in its conclusion that Malhotra et al. discloses a proportion of 9 wt.% thiodipropionic acid and tocopheral relative to the filler, the reference could still not be understood to disclose or suggest the invention recited in amended independent claim 1.

Applicants further submit that the secondary citations to Tsuchida et al. and Kitamura et al. fail to cure the above-noted deficiencies of Malhotra et al.

Tsuchida et al. is cited in the Office Action as suggesting the use of thiodipropionic acid as a lightfastness-imparting agent in an inkjet recording medium. Nevertheless, Applicants submit that Tsuchida et al., even when taken collectively with Malhotra et al., fails to suggest an ink-receiving layer that comprises thiodipropionic acid or a salt thereof and tocopherol or a derivative thereof in a total proportion of 1 to 5 wt.% based on the inorganic pigment, as recited in amended independent claim 1.

Kitamura et al. is cited in the Office Action as suggesting boehmite or pseudo-boehmite aluminas for inkjet recording mediums. Applicants submit, however, that Kitamura et al., even when taken collectively with Malhotra et al. and Tsuchida et al., fails to suggest an ink-receiving layer that comprises thiodipropionic acid or a salt thereof and tocopherol or a derivative thereof in a total proportion of 1 to 5 wt.% based on the inorganic pigment, as recited in amended independent claim 1.

For at least the foregoing reasons, Applicants submit that amended independent claim 1 is patentably distinguishable from the references cited in the Office Action. Accordingly, reconsideration and withdrawal of the Section 103 rejections are respectfully requested.

Dependent claims 3-6 should be deemed allowable for reciting features of the invention in addition to those recited in independent claim 1. Further individual consideration of the dependent claims is requested.

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Applicants submit that the present application is in condition for allowance. Favorable reconsideration, withdrawal of the rejections set forth in the Office Action, and a Notice of Allowability are requested.

Applicants' undersigned attorney may be reached in our Washington, D.C. Office by telephone at (202) 530-1010. All correspondence should continue to be directed to our address listed below.

Respectfully submitted,

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